

IN THE EUROPEAN PATENT OFFICE/IPEA

Applicant: Friedrich-Wilhelm Kühne and Vitam Kodelja
International Application No.: PCT/US00/22610
International Filing Date: 18 August 2000
For: Chemically-Stabilized Chlorite Solutions for Treating Cancer
Attorney Docket No.: 25708-0004

RESPONSE TO WRITTEN OPINION

Examiner D. Economou

VIA TELECOPIER 011-49-89-2399-4465

Sir:

This communication responds to the Written Opinion mailed July 23, 2001, for the above-captioned application. A response is due September 24, 2001 (September 23 being a Sunday).

AMENDMENTS

Please **cancel all pending claims 1-7** without prejudice or disclaimer, and **add new claims 1-21** as listed in attached Appendix A.

REMARKSNovelty and Inventive Step

Applicants note with gratitude that the Examiner has indicated that claims 2, 3, 6, and 7 are novel and involve an inventive step. New claims 1-10 correspond to prior claims 2, 3, 6, and 7 and Applicants respectfully submit that those claims also are novel and involve an inventive step.

The Examiner asserts that original claims 1 and 4 lack novelty over reference D1, and that claim 5 lacks inventive step over the same reference. Applicants respectfully submit that the rejection of claims 1 and 4 is rendered moot by virtue of the claim amendments submitted with this paper. With respect to original claim 5, which now corresponds to new claim 11 and corresponding dependent claims, Applicants respectfully traverse the rejection.

Thus, nothing in reference D1 teaches or suggests the method recited in claim 11, where macrophages are removed from a patient, treated with a stabilized chlorite solution under conditions sufficient to increase the expression of DCC in the macrophages, and then placed back in the mammal. Rather, reference D1 teaches the *in vitro* treatment of cells with a stabilized chlorite solution and also teaches the infusion of a stabilized chlorite solution directly into patients. Nothing in the cited reference suggests treating cells with the stabilized chlorite solution *ex vivo* and then replacing the cells into a patient. Accordingly, Applicants respectfully submit that claims 11 *et seq.* involve an inventive step over the cited reference.

Respectfully submitted,



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September 24, 2001
Date

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APPENDIX A: NEW CLAIMS

1. A method of treating cancer in a mammal, wherein said cancer is characterized by a reduced expression of the DCC protein, comprising administering an aqueous solution comprising a stabilized chlorite solution.
2. The method of claim 1, wherein the cancer is selected from the group consisting of colon carcinoma, gastric carcinoma, esophageal carcinoma, rectal carcinoma, pancreatic carcinoma, prostate carcinoma, glioma and neuroblastoma.
3. The method of claim 2, wherein said cancer is colon carcinoma.
4. The method of claim 2, wherein said cancer is gastric carcinoma.
5. The method of claim 2, wherein said cancer is esophageal carcinoma.
6. The method of claim 2, wherein said cancer is rectal carcinoma.
7. The method of claim 2, wherein said cancer is pancreatic carcinoma.
8. The method of claim 2, wherein said cancer is prostate carcinoma.
9. The method of claim 2, wherein said cancer is glioma.
10. The method of claim 2, wherein said cancer is neuroblastoma.
11. A method of treating cancer in a mammal comprising:
 - (a) removing macrophages from the mammal;
 - (b) contacting the macrophages with an effective amount of an aqueous solution comprising a stabilized chlorite solution under conditions sufficient to increase the expression of DCC in the macrophages; and
 - (c) introducing the macrophages from step (b) back into the mammal.
12. The method of claim 11, wherein said cancer is characterized by a reduced expression of the DCC protein.
13. The method of claim 12, wherein the cancer is selected from the group consisting of colon carcinoma, gastric carcinoma, esophageal carcinoma, rectal carcinoma, pancreatic carcinoma, prostate carcinoma, glioma and neuroblastoma.
14. The method of claim 13, wherein said cancer is colon carcinoma.
15. The method of claim 13, wherein said cancer is gastric carcinoma.

16. The method of claim 13, wherein said cancer is esophageal carcinoma.
17. The method of claim 13, wherein said cancer is rectal carcinoma.
18. The method of claim 13, wherein said cancer is pancreatic carcinoma.
19. The method of claim 13, wherein said cancer is prostate carcinoma.
20. The method of claim 13, wherein said cancer is glioma.
21. The method of claim 13, wherein said cancer is neuroblastoma.